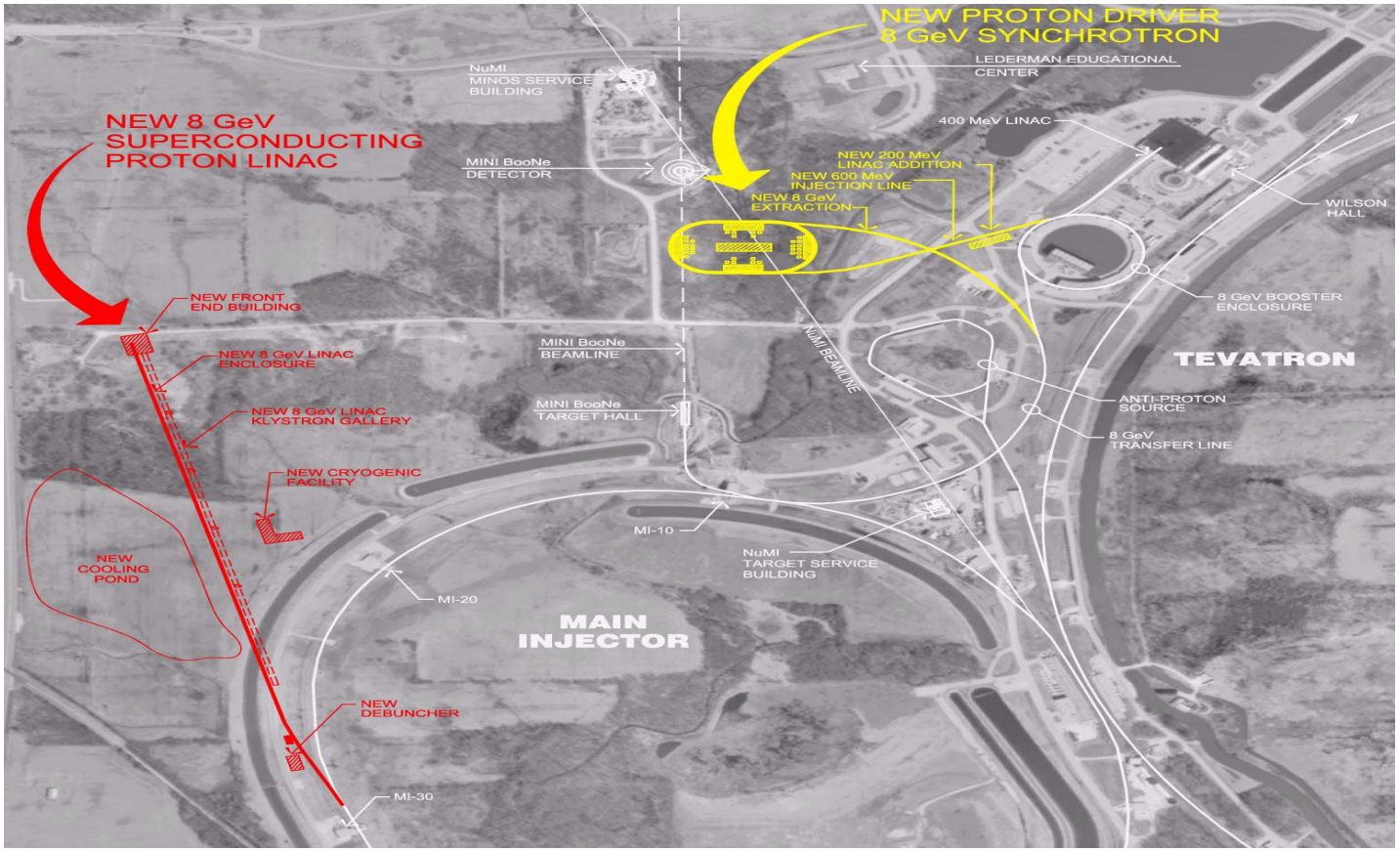
Laser Chopping Collaboration Meeting

- Background:
  - Fermilab Long Range Planning Committee has identified Proton Driver as a candidate for a future construction project.
  - This project will include:
    - A new 8 GeV, 0.5 MW Proton Driver. There are two design options:
      - A sc linac (the preferred option) or
      - A rapid cycling synchrotron
    - An upgraded 120 GeV, 2 MW Main Injector.
  - A study group has been formed. The goal is to complete by the end of the year the documentation required by DOE's CD-0 approval.
- Purpose of this meeting :
  - Laser chopping is an important part of the study.
  - It can also be useful for improving the present Booster performance.
  - But Fermilab does not have established expertise in this field.
  - This meeting will provide an opportunity for us to learn from experts from other institutions (morning session) and to evaluate the status of our work (afternoon session).

Proton Driver Study II: 8 GeV

(Fermilab-TM-2169)



Agenda

8:30-8:40	Purpose of this meeting – W. Chou (Fermilab)
8:40-9:10	A dual-beam interferometer near the speed of light – H. Bryant (U. of New Mexico)
9:10-9:40	Saturation energy density for laser stripping via a broad Stark state – I. Yamane (KEK)
9:40-10:10	Laser stripping via a broad Stark state: POP experiment at BNL – D. Raparia (BNL)
10:10-10:40	Coffee break
10:40-11:10	Laser profile monitor implementation at SNS and laser stripping R&D for future high power upgrade – S. Assadi (ORNL)
11:10-11:40	A0PI laser system – R. Tikhoplav (U. of Rochester/Fermilab)
11:40-12:10	Pulse shape distortion in laser amplification and its effects – S.Y. Lee (Indiana U.)
12:10-1:30	Lunch
1:30-1:45	Chopping requirements of the Fermilab linac – W. Chou (Fermilab)
1:45-2:15	Injection study with and without chopping – J. MacLachlan (Fermilab)
2:15-3:00	Laser chopping schemes – R. Tomlin (Fermilab)
3:00-3:30	Coffee break
3:30-5:00	Discussion